

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

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A5  
Claim 1 (currently amended): An ink supply unit for an ink jet recording apparatus, having:

a supporting member including a valve seat; and

a membrane valve ~~which includes~~ including at its periphery a thick portion, ~~supported by a valve seat constituting member and~~ including at its central region a thin portion having an ink passing port in a center, said thick portion of said membrane valve being supported by said supporting member, and said ink passing port of said membrane valve selectively contacting said valve seat, which is pressed at the ink passing port against a valve seat,

and ~~which~~ wherein when ink is provided to said membrane valve, said ink passing port comes into contact with or separates from the valve seat correspondingly to a differential pressure of ink across said membrane valve, and

wherein the central region of the thin portion of the membrane valve has an angled portion that is concentric with respect to the ink passing port ~~is formed in the central region of the thin portion of the membrane valve.~~

Claim 2 (currently amended): An ink supply unit for an ink jet recording apparatus, having:

a supporting member including a valve seat;

a membrane valve ~~which includes~~ including at its periphery a thick portion, ~~supported by a valve seat constituting member and~~ including at its central region a thin portion having an ink passing port in a center, said thick portion of said membrane valve being supported by said supporting member, and said ink passing port of said membrane valve selectively contacting said valve seat; and

elasticity applying means, which is pressed at for pressing the ink passing port against  
[[a]] said valve seat,

wherein by elasticity applying means, and which when ink is provided to said membrane  
valve, said ink passing port comes into contact with or separates from the valve seat  
correspondingly to a differential pressure of ink across said membrane valve, and

wherein the thin portion of the membrane valve is formed as an approximately flat  
surface, ~~and having~~ plural protruding rib portions radially extending from the ink passing port  
and located at regular intervals ~~are formed~~.

Claim 3 (original): The ink supply unit for an ink jet recording apparatus according to  
claim 1 or 2, wherein the membrane valve is arranged in a flowing passage connecting an ink  
cartridge and an ink jet recording head.

Claim 4 (original): The ink supply unit for an ink jet recording apparatus according to  
claim 1 or 2, wherein the membrane valve is arranged in an ink container detachably attached to  
a flowing passage for supplying ink to an ink jet recording head.

Claim 5 (currently amended): The ink supply unit for an ink jet recording apparatus  
according to claim [[1]] 2 or 2, wherein ~~the a~~ vicinity of ~~the a~~ periphery of the ink passing port is  
pressed against the valve seat by the elasticity applying means.

Claim 6 (currently amended): A membrane valve of an ink supply unit for an ink jet  
recording apparatus, comprising:

~~which includes at its periphery~~ a thick portion at a periphery of said membrane valve,  
configured to be supported by a supporting member;

a thin portion at a central region of said membrane valve supported by a valve seat  
~~constituting member through the thick portion;~~ and

an ink passing port in ~~the a~~ center of the thin portion, configured to selectively contact a  
valve seat of the supporting member, and which

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wherein when ink is provided to said membrane valve, said ink passing port comes into contact with or separates from [[a]] the valve seat at the ink passing port correspondingly to a differential pressure of ink across said membrane valve, and

wherein the central region of the thin portion has an angled portion that is concentric with respect to the ink passing port ~~is formed in the central region of the thin portion.~~

Claim 7 (currently amended): A membrane valve of an ink supply unit for an ink jet recording apparatus, comprising:

~~which includes at its periphery a thick portion at a periphery of said membrane valve,~~  
configured to be supported by a supporting member;

a thin portion at a central region of said membrane valve; supported by a valve seat  
~~constituting member through the thick portion, and~~

an ink passing port in the a center of the thin portion, configured to selectively contact a valve seat of the supporting member, and which

wherein when ink is provided to said membrane valve, said ink passing port comes into contact with or separates from [[a]] the valve seat at the ink passing port correspondingly to a differential pressure of ink across said membrane valve, and

wherein the thin portion is formed as an approximately flat surface, and having plural protruding rib portions radially extending from the ink passing port and located at regular intervals ~~are formed.~~

Claim 8 (currently amended): The membrane valve of an ink supply unit for an ink jet recording apparatus according to claim 6 or 7, wherein the membrane valve further comprises:

a region with which elasticity applying means comes into contact is formed in the vicinity of the ink passing port, said region being configured to be a contact surface for elasticity applying means for pressing said ink passing port against the valve seat.

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Ab Claim 9 (new): The ink supply unit for an ink jet recording apparatus according to claim 1, further comprising elasticity applying means for pressing said ink passing port against said valve seat.

Claim 10 (new): The ink supply unit for an ink jet recording apparatus according to claim 1, wherein a shape of said angled portion is selected from the group consisting of a "V" shape and a "U" shape.

Claim 11 (new): The membrane valve of an ink supply unit for an ink jet recording apparatus according to claim 6, wherein a shape of said angled portion is selected from the group consisting of a "V" shape and a "U" shape.

Claim 12 (new): An ink supply unit for an ink jet recording apparatus, having:  
a valve seat; and

a membrane valve including at its periphery a periphery portion, and including at its central region a central portion having an ink passing port in a center, said periphery portion of said membrane valve being supported by a supporting member, and said ink passing port of said membrane valve selectively contacting said valve seat,

wherein when ink is provided to said membrane valve, said ink passing port comes into contact with or separates from the valve seat correspondingly to a differential pressure of ink across said membrane valve, and

wherein the central region of the central portion of the membrane valve has an angled portion that is concentric with respect to the ink passing port.

13. (new): An ink supply unit for an ink jet recording apparatus, having:  
a valve seat;

a membrane valve including at its periphery a periphery portion, and including at its central region a central portion having an ink passing port in a center, said periphery portion of

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said membrane valve being supported by a supporting member, and said ink passing port of said membrane valve selectively contacting said valve seat; and

elasticity applying means for pressing the ink passing port against said valve seat,

wherein when ink is provided to said membrane valve, said ink passing port comes into contact with or separates from the valve seat correspondingly to a differential pressure of ink across said membrane valve, and

wherein the central portion of the membrane valve is formed as an approximately flat surface, having plural protruding rib portions radially extending from the ink passing port and located at regular intervals.

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